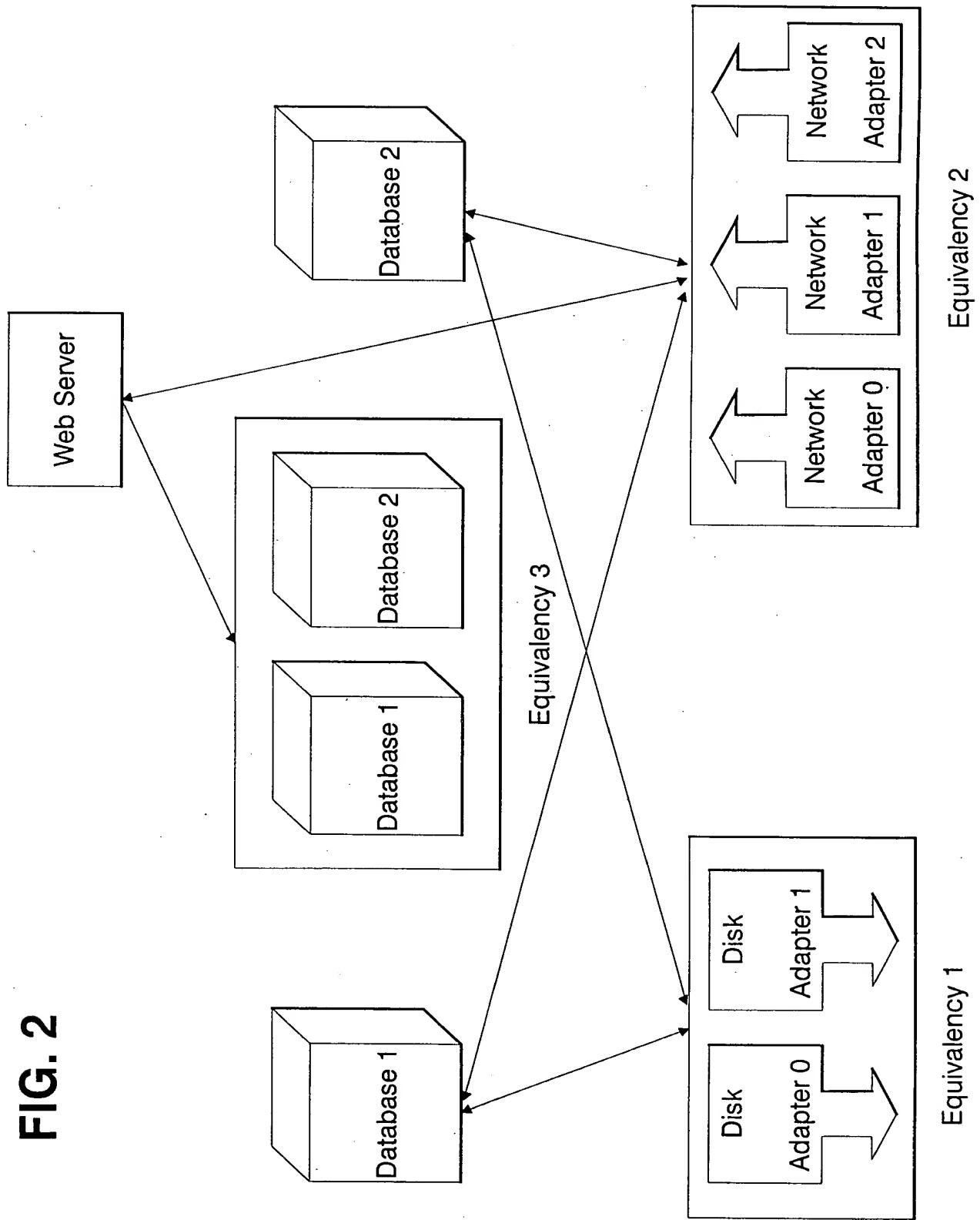
**FIG. 1**



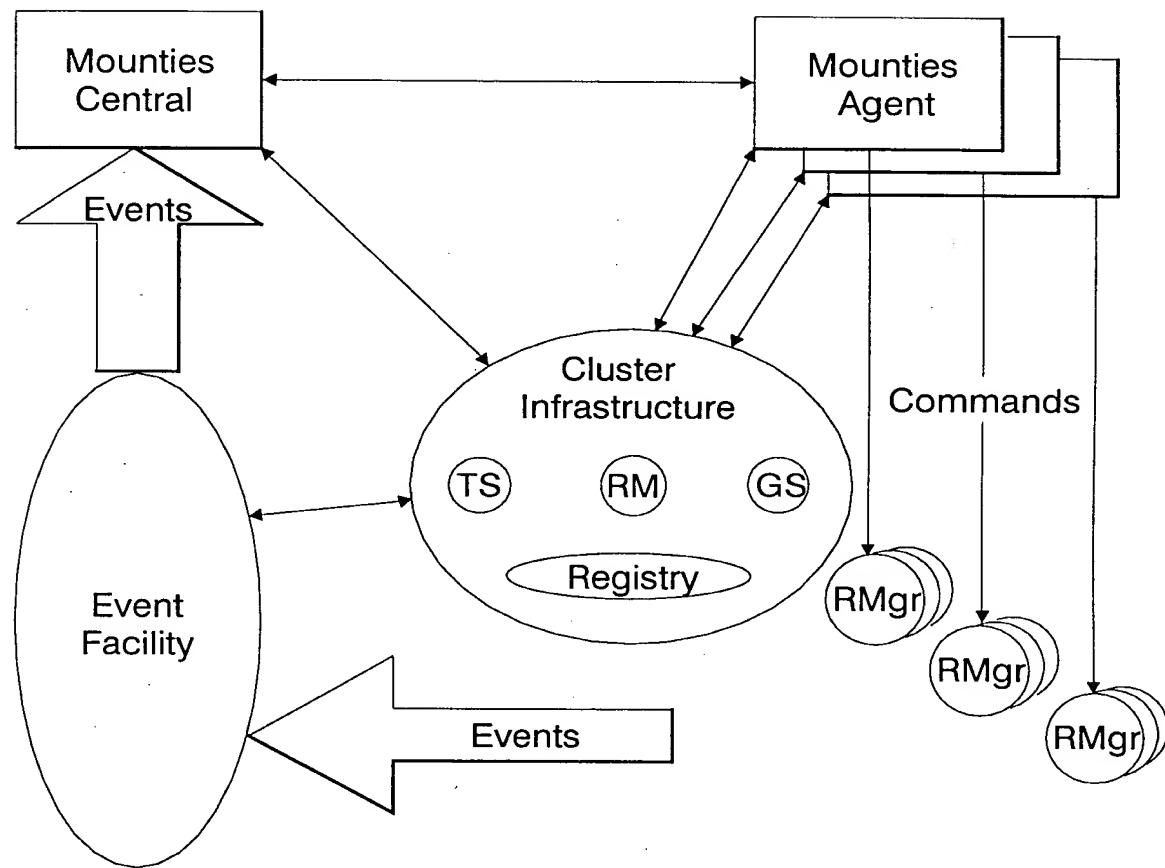


FIG. 3

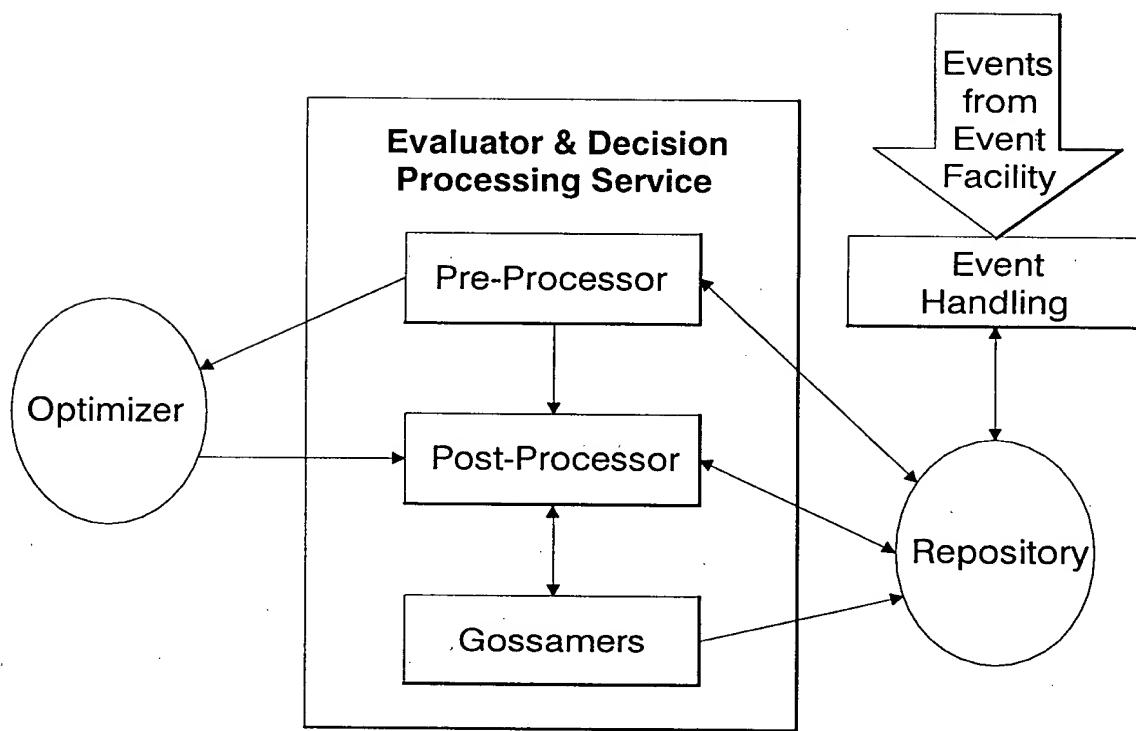
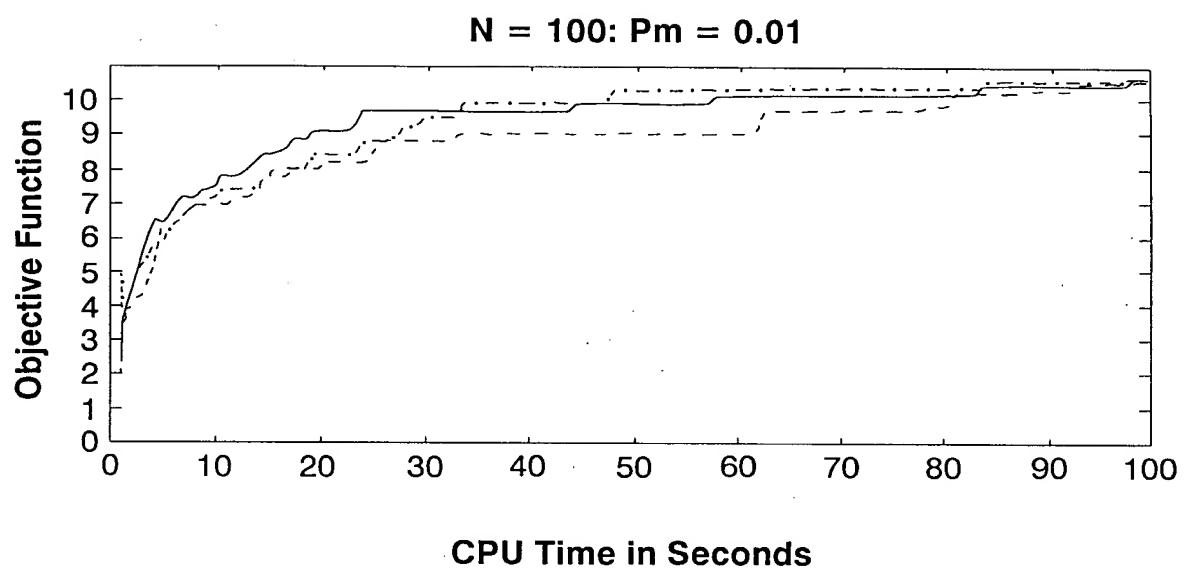


FIG. 4

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The Performance of the Algorithm on a Synthetic Example

FIG. 5

1. Check all vertices and mark every low-level resource. The marked vertices form $Frontier(1)$.

$i = 1;$

2. Repeat

{

2.1. Mark all resources not already included in some frontier.

3.2. For every resource v ,

3.2.1. unmark v if $dep(v, i)$ for some i contains

some $u \notin Frontier(1) \cup Frontier(2) \cup \dots \cup Frontier(i)$.

3.3. If more than k resources are marked, unmark at random all except k

3.4. The marked resources constitute $Frontier(i+1)$.

3.5. Repeat

{

3.5.1. For every resource v in $Frontier(i+1)$,
if any of the variables associated with v (z_v, l_v etc)
are found to be fractional, define all of them to be integer variables.

3.5.2. Solve the new ILP

}

Until no more fractional variable are found

4. For every variable defined as an integer variable,
convert it into a fixed value equal to its current value.
5. $i = i + 1$;

}

Until every vertex has been included in some frontier.

FIG. 6

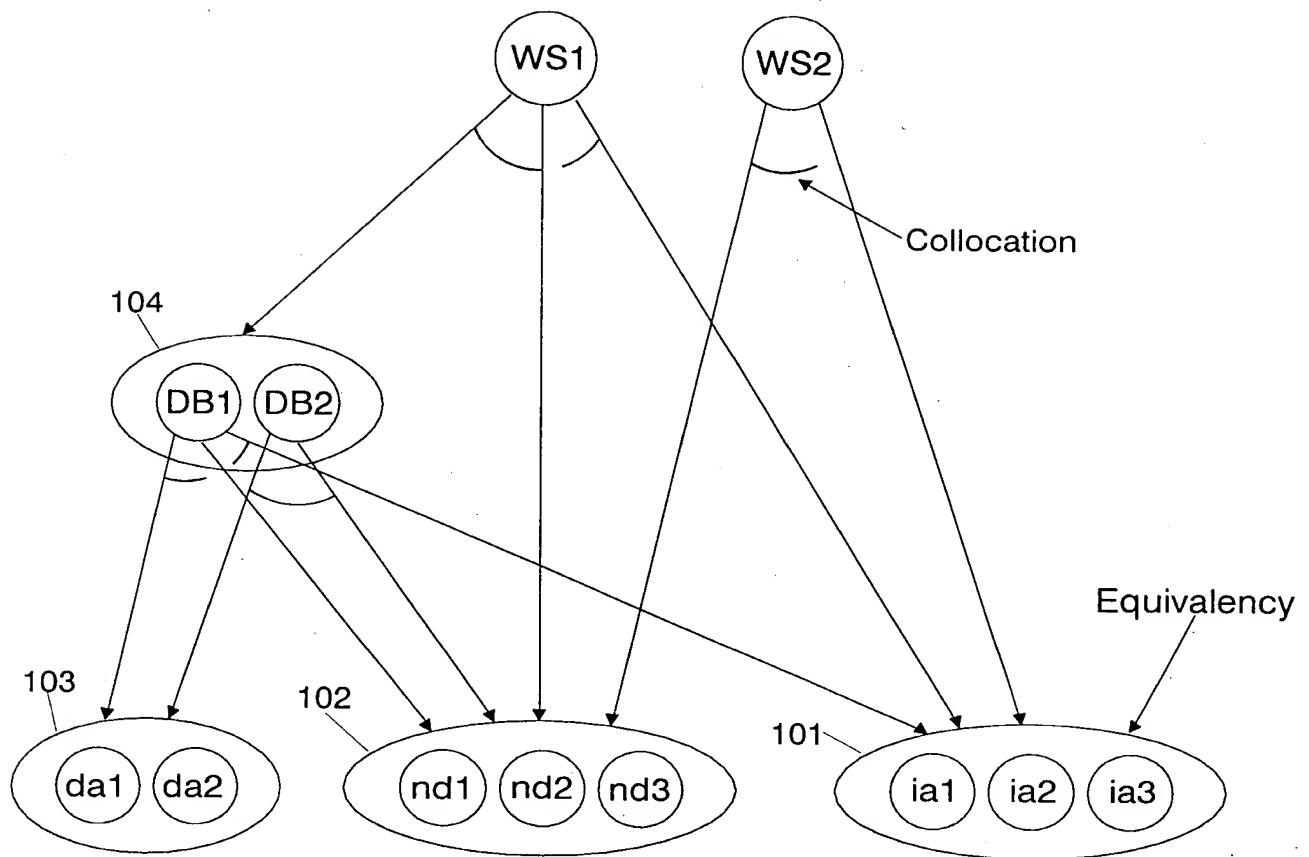


FIG. 7

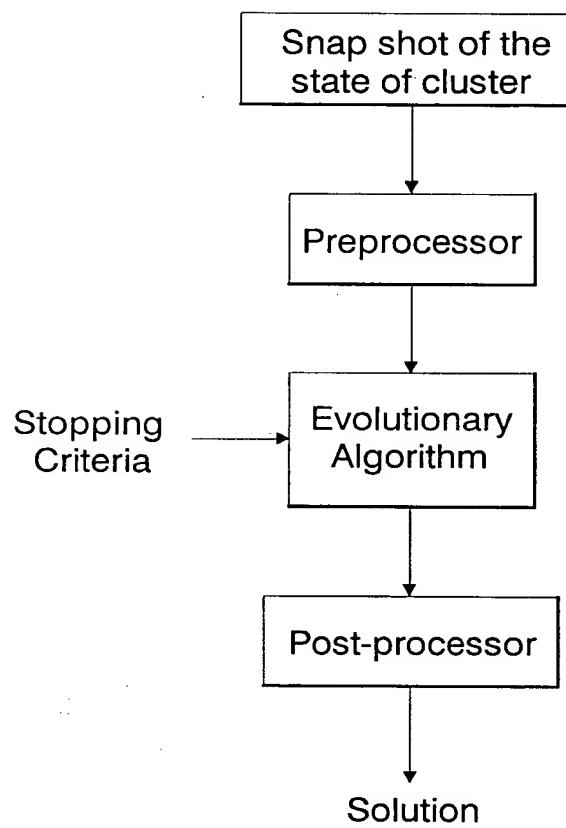


FIG. 8

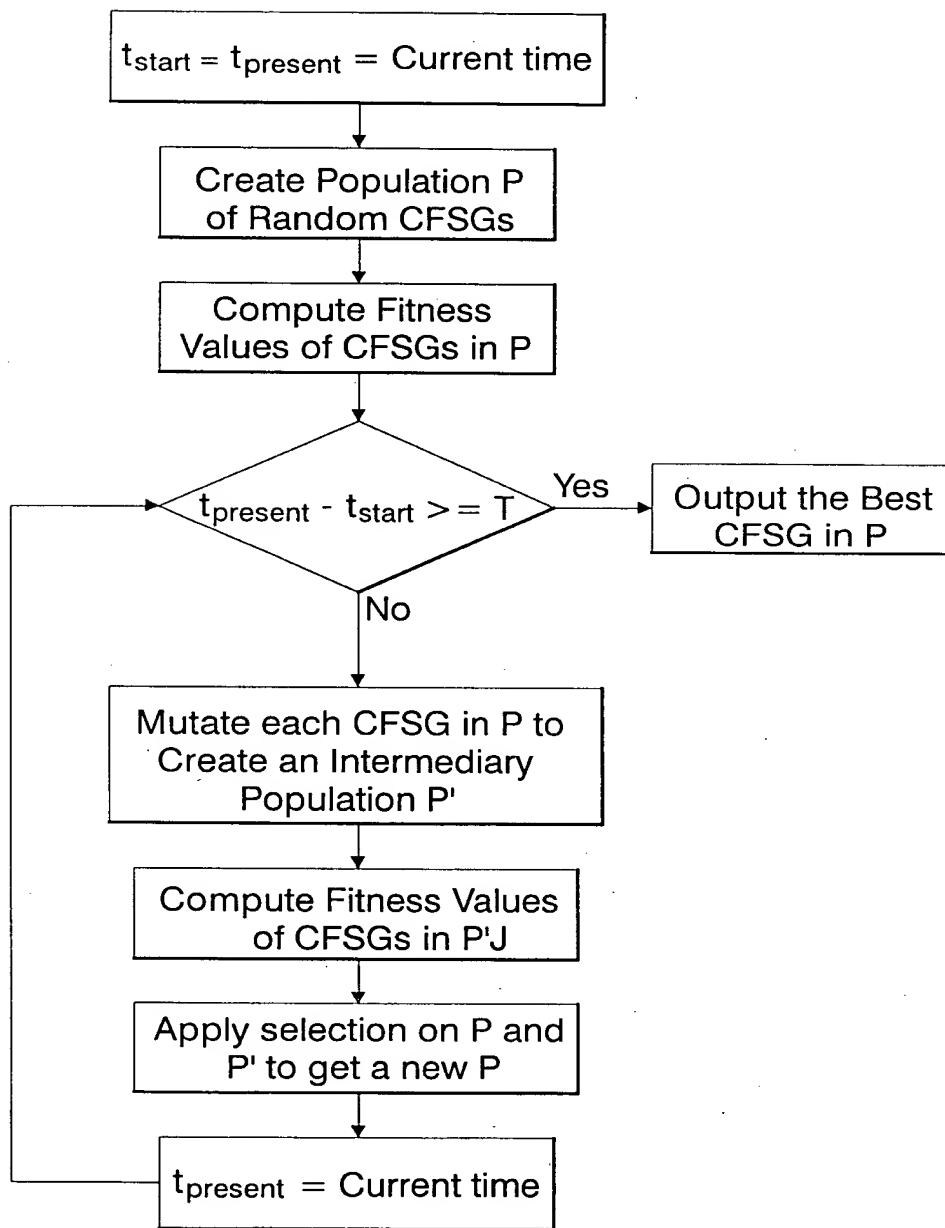


FIG. 9

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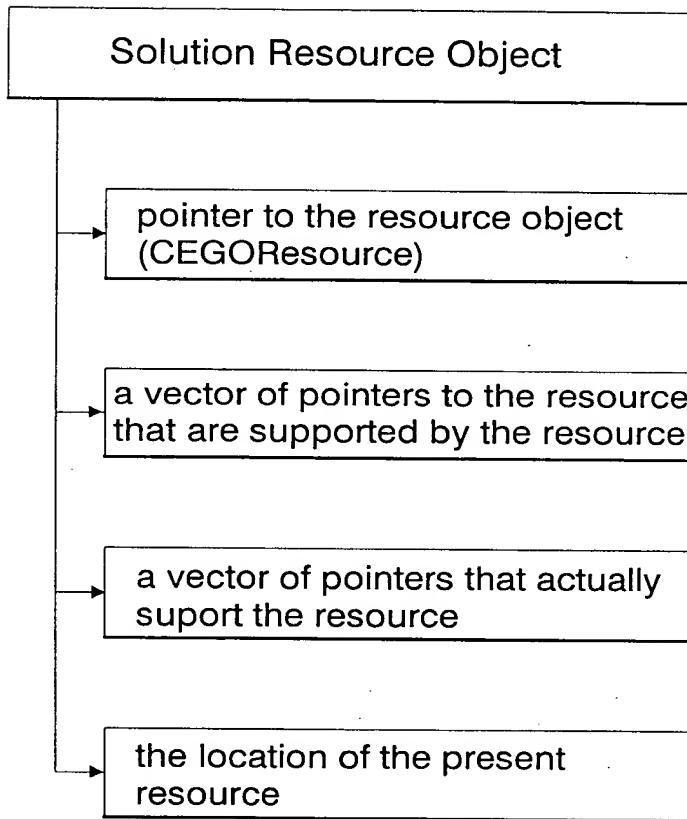


FIG. 10

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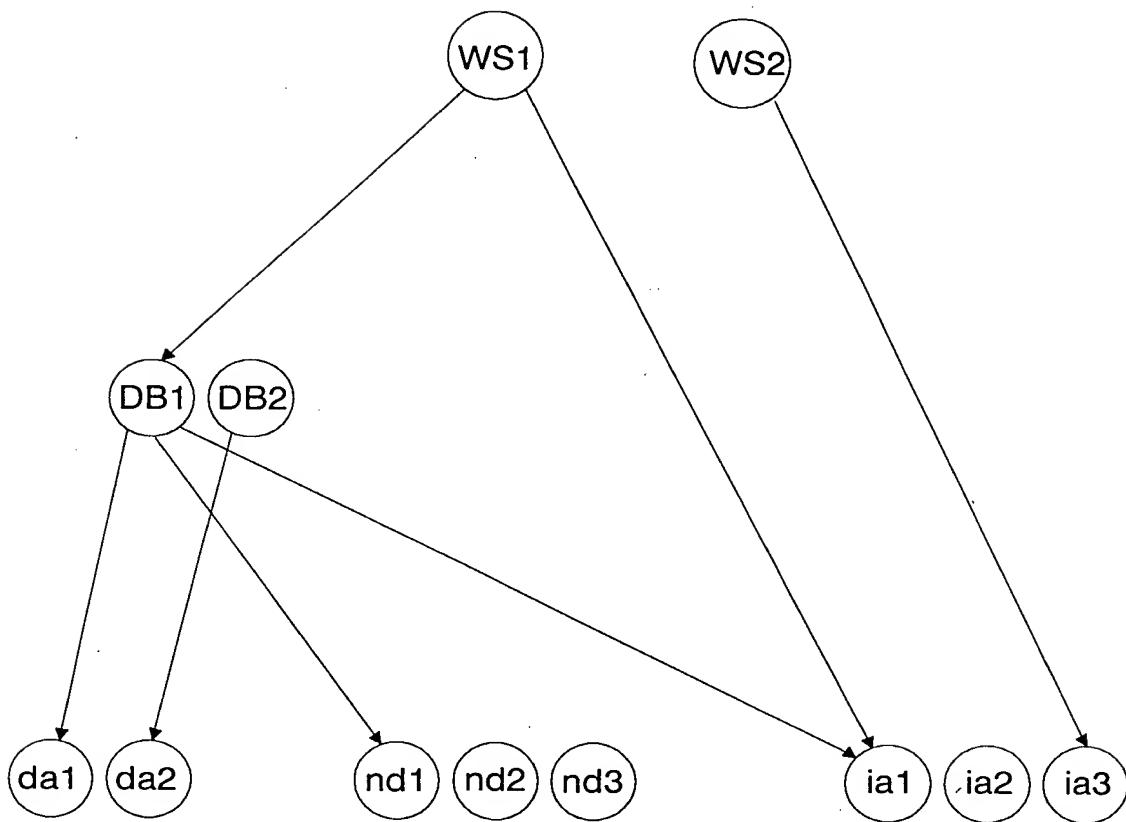


FIG. 11

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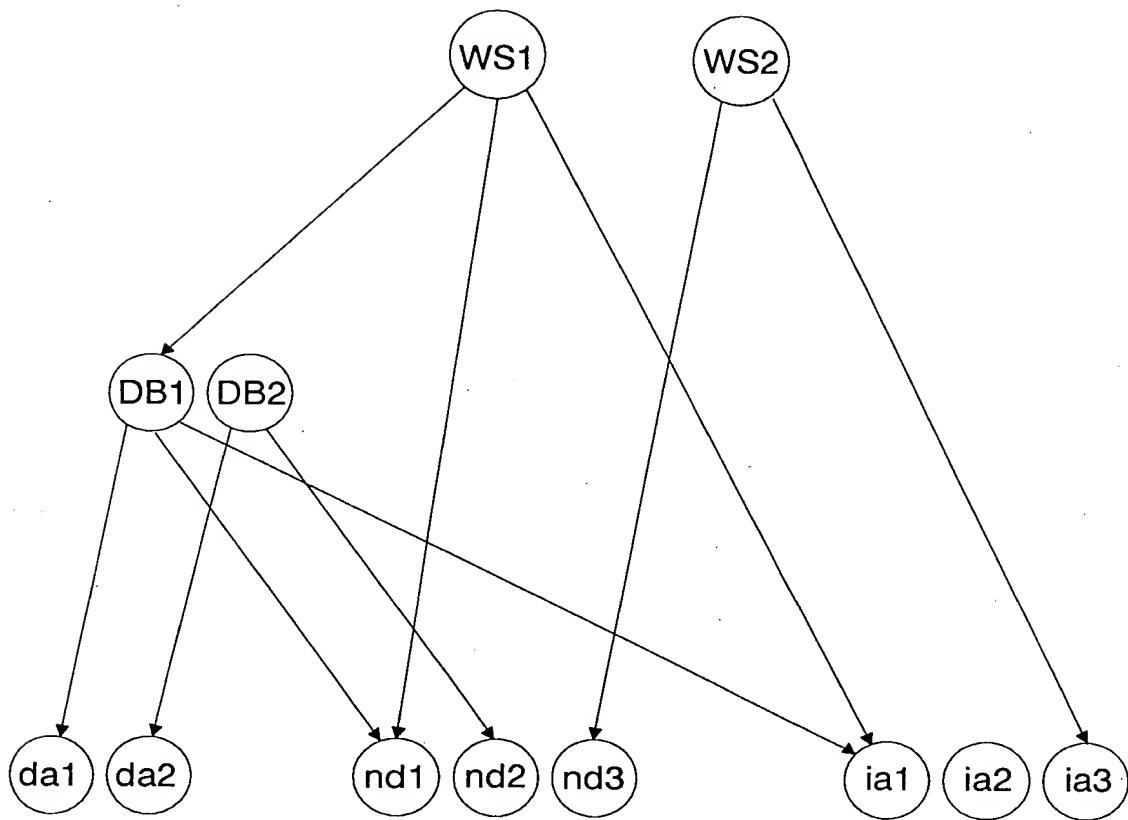


FIG. 12

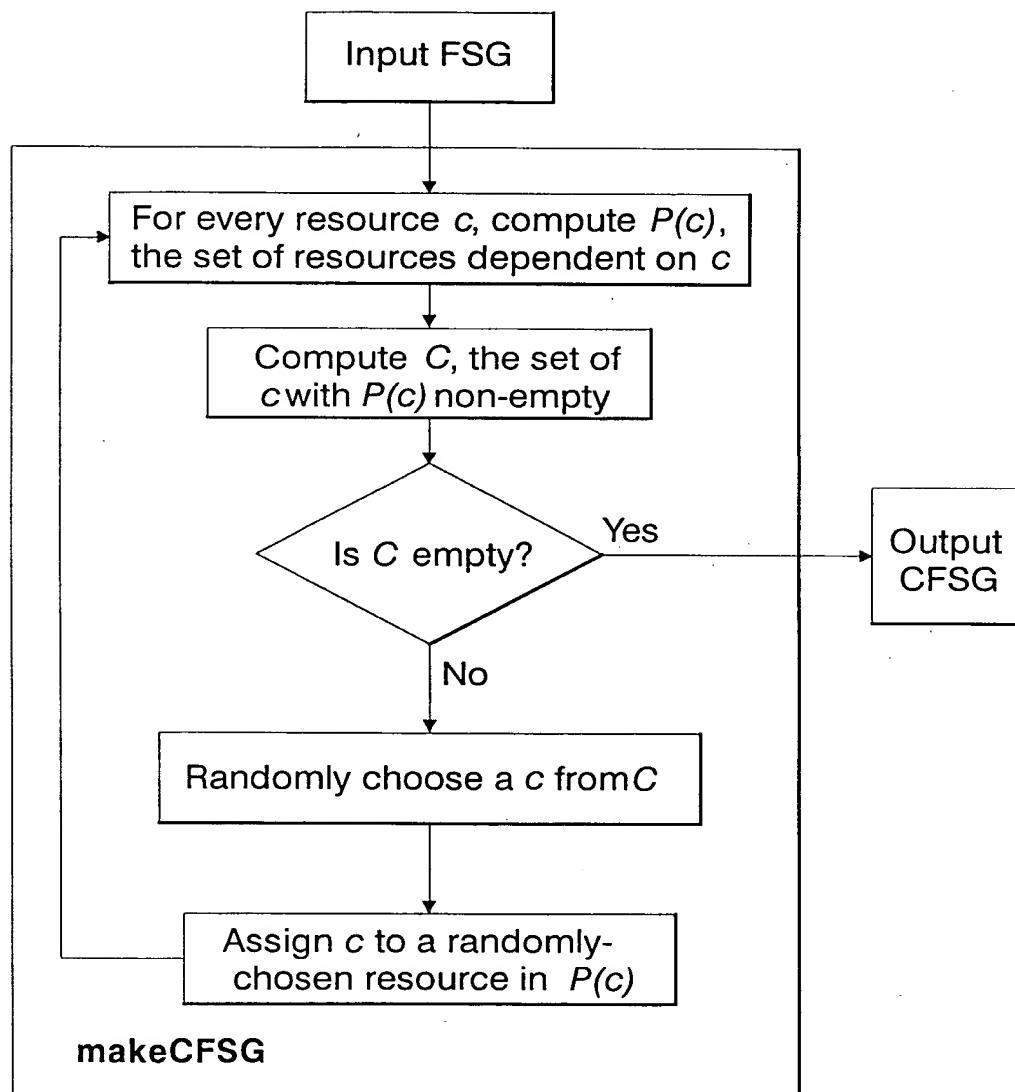


FIG. 13

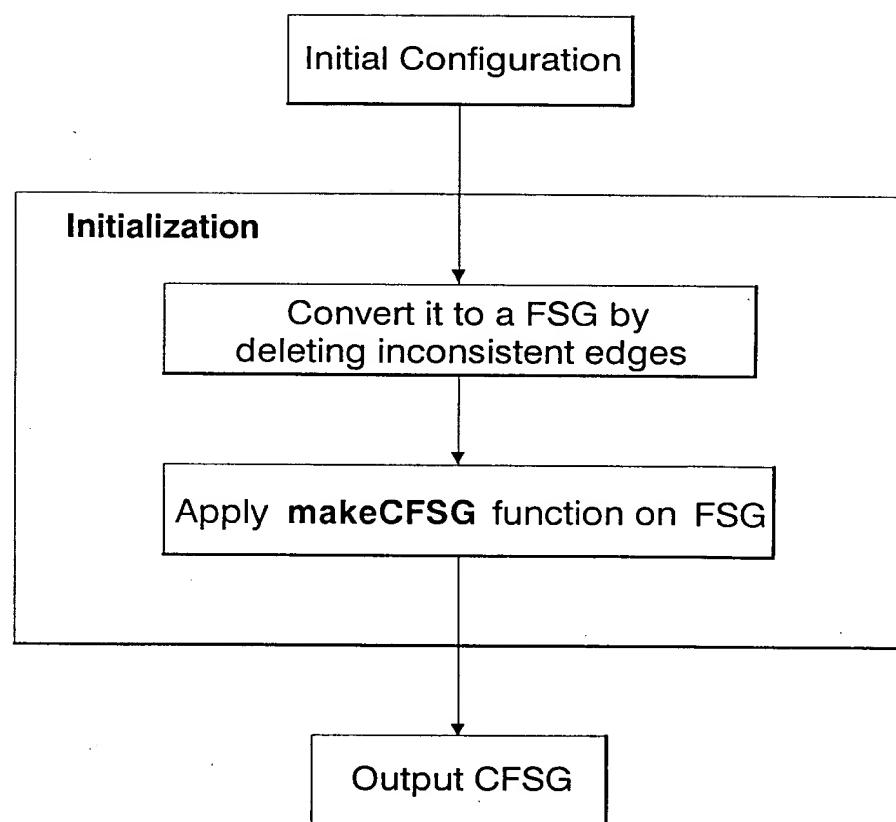


FIG. 14

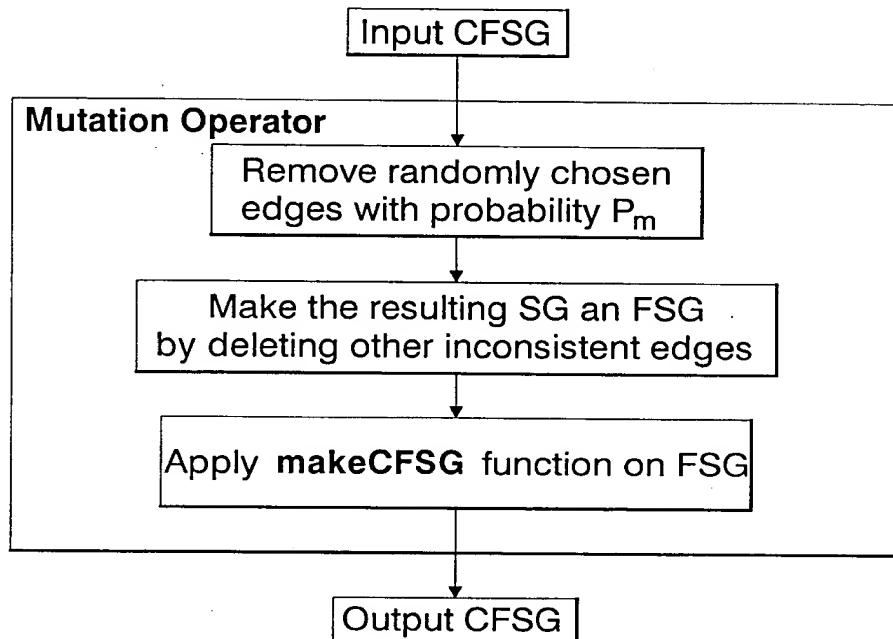


FIG. 15

$N = 100; P_m = 0.01$

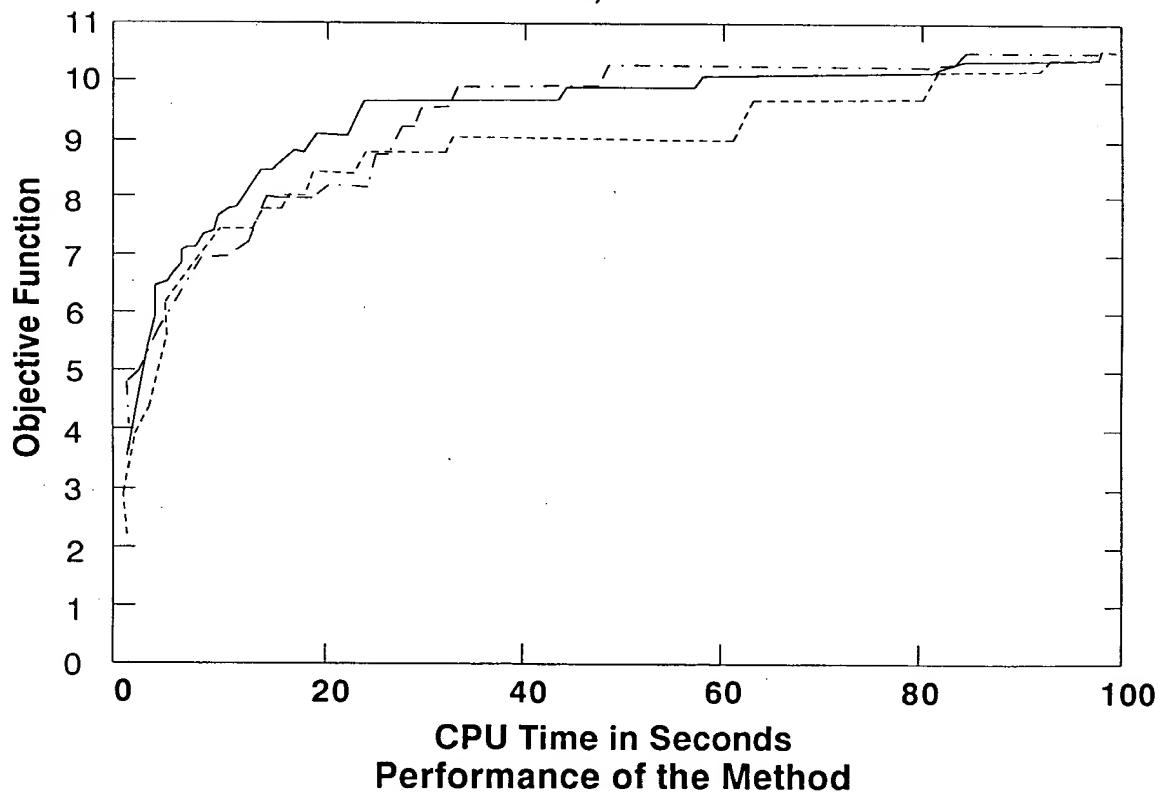


FIG. 16

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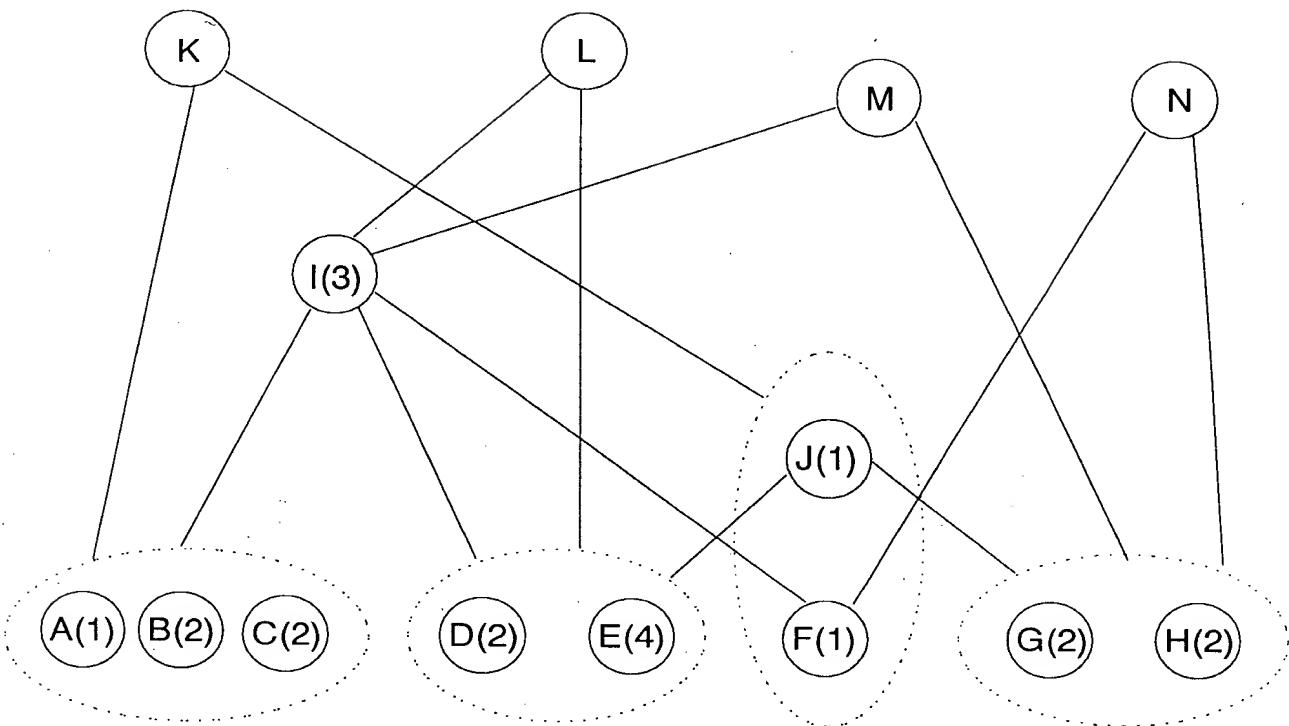


FIG. 17

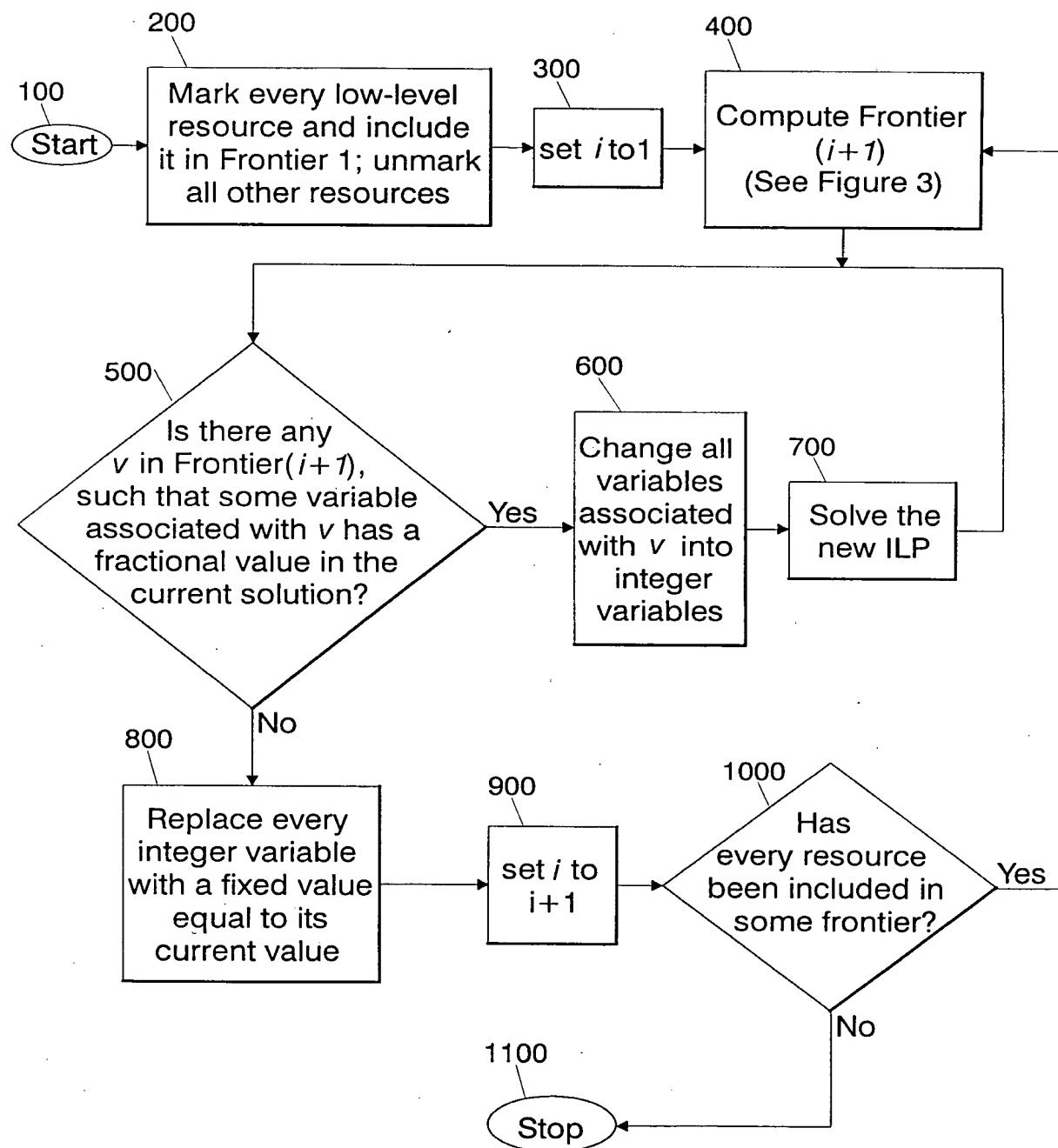


FIG. 18

